pensive, and much inferior in usefulness to the independent canal."
In this remark, I .have heretofore expressed the opinion, that I
thought General Bernard in error, and I still think so—a mixed
improvement, in part slack water, and in part canal, like that along
the Schuylkill river, would be the cheapest that could be adopted,
and admirably adapted to the North Branch between Cumberland
and the mouth. of Savage. In the construction of such an im-
provement an independent canal would be adopted along those
portions of the river where the bottom lands are favorable, whether
on the Maryland or the Virginia side, (the Schuylkill navigation, in
its entire length, crosses the river 19 times, using for that purpose the
slack water of the dams,) and where the rocky cliffs are met with
they would be passed by slack water. Such an improvement
ought not to cost more than did the Schuylkill improvement say
$30,000 per mile, which would make $840,000 for 28 miles, (de-
ducting 2 miles from the distance given by Gen. Bernard,—as that
distance nearest Cumberland, will be made navigable by the canal
when completed to Cumberland, by the back water of dam No. 8,
at that place, which is necessarily constructed at the head of,
and as a part of the main canal terminating at that point.) I have
deemed these remarks in reference to the cost of the extension due
to myself, having frequently, heretofore, expressed the opinion I
now do, though never called on by the Company to do so officially.

The only other estimate for an improvement up the North
Branch above Cumberland, made by direction of the Company,
was likewise for an independent canal. It bears date in Septem-
ber, 1829, and was prepared by Messrs. Roberts and Cruger. Its
amount is $959,214 98. The lockage is stated by them to be
334 feet. They made no estimate or calculation for a slack water
navigation ; nor has any estimate ever been made by this Compa-
ny for such an improvement between Cumberland and the mouth
of Savage.

Respectfully submitted,
CHARLES B. FISK,
Chief Engineer.